

TO THE MEDICAL PROFESSION

'DISPRIN'
REGD



NEUTRAL
SOLUBLE
ASPIRIN

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An introduction to

‘DISPRIN’

NEUTRAL
SOLUBLE
ASPIRIN

RECKITT AND COLMAN LTD., HULL AND LONDON
(Pharmaceutical Dept., Hull)

DISPRIN

(Reg'd)

SUMMARY OF CLAIMS

Disprin tablets contain 5 grains of acetylsalicylic acid with the requisite calcium base to form, in water, 6 grains of Calcium Aspirin.

Disprin tablets, when placed in water, effervesce gently and form a substantially neutral solution of Calcium Aspirin.

Disprin provides an elegant means of circumventing the inherent instability of Calcium Aspirin. In the case of Disprin the Calcium Aspirin is not formed until the tablet is immersed in water or other aqueous fluid, *i.e.* the Calcium Aspirin is not formed until it is *actually required for use*. In this way undesirable decomposition products are avoided. The tablet is extremely stable over long periods of time under reasonable storage conditions.

Disprin has all the known advantages of Calcium Aspirin over ordinary aspirin without its disadvantages. Because Disprin is ingested as a neutral solution it is quicker acting, has a more marked sedative action, does not irritate the gastric mucosa (which irritation has been demonstrated to result from the adherence of insoluble particles of ordinary aspirin) nor is it liable, even in large doses, to encroach on the systemic alkali reserve. Disprin meets the problem of presenting a soluble and stable tablet, and thus provides an ideal means of readily controlling dosage.

Disprin tablets are palatable and especially suitable for administration to children. Because of this palatability it is perhaps well to advise parents not to leave them about for children to take.

Disprin is indicated for all those conditions for which ordinary aspirin (or calcium aspirin) would otherwise be prescribed.

DISPRIN

AND THE PROBLEM OF ACETYLSALICYLATE MEDICATION

For all its wide application, there are very real disadvantages in the therapeutic usage of aspirin which are due to the inherent characteristics of acetylsalicylic acid. These disadvantages are so considerable that, during recent decades, much thought has been given by scientific workers to attempts to overcome them.

The disadvantages of ordinary aspirin.

Ordinary aspirin is only slowly and sparingly soluble. Particles of aspirin have been shown to be capable of severely irritating the gastric mucosa^{1,2}. Reactions may range from acute indigestion to haemorrhage or, if aspirin is taken repeatedly, to chronic gastritis. Confirmatory evidence has been obtained by gastroscopic examination³. Finally, when large doses of aspirin are required, such as for example in the treatment of rheumatic fever, there is an additional risk of upsetting the acid base equilibrium with ordinary aspirin⁴.

1. Douthwaite, A. H. (1938), *Brit. med. J.*, **1**, 1143.
2. Douthwaite, A. H., and Lintott, G. A. M. (1938), *Lancet*, **2**, 1222.
3. Hurst, A., and Lintott, G. A. M. (1939), *Guy's Hosp. Reports* p. 173.
4. Coplans, N., Gellman, I., and Green, A. G. (1939), *The Med. Press. and Circular*, Sept., p. 199.

Calcium Aspirin meets these disadvantages.

Most of these disadvantages have been met by calcium aspirin. It is more speedily assimilated and less rapidly eliminated⁵. Calcium aspirin is locally innocuous to the gastric mucosa, and can often be taken by patients in whom ordinary aspirin produces dyspeptic symptoms². Where massive doses are indicated, e.g. for rheumatic fever, calcium aspirin has less tendency to produce an albuminuria, and is less toxic as determined by the so-called secondary signs of toxicity such as vertigo, convulsions, disturbance of vision and hearing⁵. These advantages indicate calcium aspirin to be preferred where aspirin would ordinarily be administered⁶.

Calcium Aspirin presents a problem of its own.

For ease of continuous use and ready availability, however, the problem with calcium aspirin has always been its inherent instability. For example, B.P.C. calcium aspirin, whether in powder or tablet form, is recognised to be unstable and to be very sensitive to moisture, with resulting decomposition. This decomposition of calcium aspirin to the more toxic and pharmacologically different salicylic acid and the nauseous acetic acid, once started, becomes autocatalytic⁷. Thus stability is essential, if the advantages of calcium aspirin over ordinary aspirin are to be realised in practice⁵.

5. Thompson, H. E., and Dragstedt, C. A., (1933), *J. Amer. Pharm. Ass.*, **22**, 1096.

6. e.g. Douthwaite, A. H. (1947), *Brit. med. J.*, **2**, 46.

7. Gellman, I. (1939), *The Manufacturing Chemist*, Jan., p. 5.

The Problem solved. The Rationale of Disprin.

The problem, therefore, has always been to circumvent this inherent instability of calcium aspirin. In Disprin this problem has been solved. Moreover, Disprin is presented in tablet form, with all the advantages of convenience and controlled dosage which this form provides.

The Disprin tablet is so formulated that when placed in water, a substantially neutral solution of calcium acetylsalicylate results from the interaction of the acetylsalicylic acid and the calcium base. In other words, the calcium aspirin is not formed until the tablet is activated by water or other aqueous fluid. Its inherent instability is thus circumvented. The undesirable decomposition products are avoided.

Administration of Disprin.

This activation of the Disprin tablet, which produces calcium aspirin, is preferably achieved by dropping the required number of tablets in a $\frac{1}{4}$ -tumbler of water and agitating the liquid with a swirling movement. The tablet dissolves—not merely disintegrates into more or less coarse particles—with gentle effervescence, in a few seconds. (Any slight residue which may be noticed is not aspirin but inert excipient.) Alternatively, the activation may be achieved by simply swallowing the tablet, or allowing it to effervesce on the tongue.

Disprin is palatable.

Disprin has been rendered palatable by skilled pharmaceutical compounding and its palatability is enhanced by the gentle effervescence which takes place on placing the tablet in the water.

Because of its palatability and convenience, Disprin is especially suitable for administration to children and invalids. In clinical trials of cases involving prolonged acetylsalicylate medication, both patients and nurses have strongly preferred Disprin over other forms of aspirin or calcium aspirin, after having once used it.

Clinical experience with Disprin.

Disprin providing as it does calcium aspirin, is non-irritant to the gastric mucosa—a fact which has been established by intensive trials in both normal and pathological subjects. Indeed, these trials have been characterised by the extreme freedom from gastric disturbances when Disprin has been administered to patients who are intolerant in this way to aspirin medication. Among hospital patients, gastroscopic examinations after the administration of Disprin to subjects suffering from such conditions as atrophic gastritis, gastric ulcer and carcinoma of the stomach have shown no irritation of the gastric mucosa except in one of a large number of such cases where an exceptionally sensitive mucous membrane liable to ulceration was diagnosed.

ADMINISTRATION

DISPRIN may be administered with all the foregoing advantages wherever acetylsalicylic acid (aspirin) or calcium acetylsalicylate (calcium aspirin) would normally be exhibited.

The conditions enumerated opposite have been treated successfully with DISPRIN without the undesirable sequelae which can be associated with acetylsalicylate medication.

Most of these conditions have been treated during the course of intensive clinical trials, with satisfactory results, especially where aspirin intolerance previously existed. (No claim is made that DISPRIN can be taken by patients who are specifically allergic to acetylsalicylic acid).

DOSAGE

For adjustment at the physician's discretion :

Indications

For analgesia, e.g. in headache, toothache, dysmenorrhea ; in pain following dental extractions ; in traumatic conditions, e.g. after fractures, sprains and soft tissue injuries.

As an antipyretic and diaphoretic in febrile conditions, e.g. in influenza, coryza, upper respiratory catarrh.

In the treatment of rheumatic conditions e.g. fibrositis, lumbago, sciatica, neuralgia, muscular pains.

As a general sedative for sleeplessness, or for the relief of pain.

Following tonsillectomy, and in the treatment of tonsillitis, pharyngitis, etc.

Dosage

Average adult dose 2 tablets repeated four hourly.

For children smaller amounts according to age.

Oral dosage as above, and as a gargle for these conditions 2 tablets of Disprin may be dissolved in warm water four hourly.

Special Applications

For the treatment of Sydenham's chorea.

Three tablets every four hours during the day for adults ; 2 tablets for children between 6 and 14.

A larger dose at night is the best remedy for sleeplessness.

For the treatment of rheumatic fever.

During the acute stage, 4 tablets every four hours night and day.

For children smaller amounts according to age.

